

What makes a Mohawk a Mohawk?

A HEAD TO HEAD,
STEEL TO STEEL,
HARD-NOSED COMPARISON
WITH OTHER TWO-POST
ABOVE GROUND LIFTS



MOHAWK 

Made in the U.S.A.

Third Party Testing

The Automotive Lift Institute (ALI), an industry trade association, has been promoting the standards for lift design and safety for automotive lifts for almost 50 years. **The design and safety standard used by ALI is ANSI 153.1-1990.** ALI has been very instrumental in promoting safety standards and educating lift users in the safe and proper usage and maintenance of lifts.

In the past all members of ALI's safety program were self certifying that their lifts met the ANSI Standard for lift

design and safety. Recently that changed when ALI contracted with ETL Testing Laboratory to provide third party testing and verification that **participants of the program met the ANSI Standard, 153.1-1990,** as well as applicable electrical safety standards.

ALI's certification program to which ETL tests and verifies compliance are stringent and rigorous. A participating lift manufacturer must meet the ANSI Standard and be part of an ongoing follow-up program to label his lift with an ALI/ETL certification label.

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PROFESSIONAL Tool Equipment News

Independent Watchdog Oversees Lift Safety

Will the next automotive lifts you buy for your shop be dependable and relatively service-free for years to come, or will they soon break down and become a safety concern?

The sources of most automotive lifts on the market today are long-established companies who design and manufacture their products in well equipped factories using highly trained workers. Too often, however, lifts are built by persons who may not have the necessary tools or experience to make sure they do the job right. The problem is, you may not know the difference until it is too late.

ANSI standards outline the design and safety features each lift should have. But the standards are only guidelines, leaving it up to each manufacturer to follow them. The Automotive Lift Institute (ALI), a self governing body of the lift industry, has found a solution.

ALI developed the Product Safety Test Requirements (PSTR), a set of stringent tests and guidelines that ensure that lifts produced by both large and small manufacturers meet ANSI standards, thereby reducing the possibility that faulty equipment makes its way on the market.

After creating the series of tests ALI requested ETL Testing Labs (one of only 12 **OSHA recognized testing labs**) to oversee the structural and electrical tests and to analyze the results. Lifts that pass these tests and meet the criteria receive ETL's approval.

Examples of a few of the tests include an operations check in which the lift goes through it's lift cycle with maximum load capacity, hydraulic safety tests, mechanical lock tests, arm restraint test, static load test and lowering speed test. The ETL examiners evaluate the results to ensure they match the claims of the manufacturers.

Mohawk's most popular two-post and four-post lifts have been listed by the ALI/ETL certification program as meeting ANSI 153.1-1990 and applicable safety standards.

When specifying or purchasing automotive lifts, you should require and look for the ALI/ETL certification label. This will assure you that the lift has been certified by an independent third party testing organization as meeting the ANSI (American National Standards Institute) and electrical safety standards.

Should a manufacturer change the design following the original test, ETL can request the lift be re-tested or remove its approval. Also ETL makes periodic, unannounced visits to factories to inspect quality control and to ensure that all lifts of a particular model are manufactured in the same manner as the lift that was tested and approved.

ETL's thorough examination of automotive lifts is still relatively new—just now in its third year. Many lifts have yet to have been tested. However, the procedure is already reaping great dividends by giving customers growing confidence that the lifts they buy have met tough design and safety standards, helping to ensure long, productive and safe service.



MOHAWK RESOURCES LTD.



Why does somebody buy a lift?



Is it to make more money or is it to make a difficult job easier?
Do people buy lifts to save time or to save money?
The answer is: people buy lifts for all these reasons.

Simply stated, a decision to purchase a lift is motivated by productivity and profit.

Where profit is not the goal, then cost cutting usually is. A municipal highway garage, for example, might not be interested in profit, but they are certainly interested in buying reliability and buying the lift which will save them the most amount of time. **Mohawk is that lift.**

Often a lift buyer purchases a price....in other words, the choice of lift is made without regard to profit

or productivity. Instead, the buyer chooses the lift with the cheapest price.

At Mohawk, we've known from the beginning that price and cost mean different things.

A lift that is poorly designed will cost you valuable time every day you use it. Lost time isn't part of a lift's price, but it certainly has its cost. We've done our homework, and we know that the extra cost of poor design or quality can exceed \$2,000 per year! Mohawk specializes in making lifts that are faster and easier to use. We may not have the cheapest price, but **no lift will ever cost you less than a Mohawk.**

Mohawk cares about performance.

Every Mohawk lift built does more to save you time and make you more money than any lift on the planet. *We pick up vehicles other lifts can't, fit where other lifts can't fit, provide access that others don't, and we provide warranties that other lift companies wouldn't dare!* We're concerned about your lift investment. Like a financial planner, we want you to invest in the lift that offers you the greatest return.

We want to show that a cheap lift is short-term thinking and your success is a long-term goal.

Following is a very in-depth analysis of the two-post, above ground lift industry and the many different designs available. You may have noticed from past experience with lifts that most companies have knuckled under to pressure from competitors to lower their prices. To sell a lift with a lower price, even the biggest companies have cut back on materials and quality. Not Mohawk! Mohawk has always used the highest quality materials and designs available because smart lift buyers like you demand it! We know you want the best because your success depends on it. And you can depend on Mohawk to keep building lifts where performance is more important than cutting our production costs.

Read on and become enlightened.

You'll only get partly through before you see how much better a Mohawk lift is. You don't have to become a lift expert to know how much more value a Mohawk lift offers, or why it's the only one worth owning.





All Mohawk lifts use strong 3/4" rolled steel C-shaped forklift channel columns. Many competitors use weaker 3/16" to 5/16" sheet metal.

Start with our columns

All Mohawk lifts are made of 3/4"-thick rolled steel C-shaped forklift channel columns. More than any other single feature, this is what makes a Mohawk lift a Mohawk lift! In shocking contrast, many of our competitors use 3/16" to 5/16" sheet metal (yes, some only 1/4th as thick as Mohawk's) that is put on a brake and bent to "form" their columns. Considering that all car lifts are a slight takeoff from a forklift have you ever seen a forklift mast made out of sheet metal? No, and you never will. Bent sheet metal is stressed sheet metal! Under load it continues to stress. Ultimately it can (and often does) crack and or spread (unbend itself) with use. A manufacturer can't build it better when the goal is to build it cheaper.

In addition to Mohawk's dramatic advantage in steel thickness, our rolled steel is inherently stronger than either bent sheet metal or extruded columns. Back to the forklift example for a second...have you ever seen a forklift mast bend, break or even wear? Never! This is the kind of strength and solidity you surround yourself with when you choose a Mohawk lift. Have you ever wondered why after nearly 100 years forklifts still don't use sheet metal posts and plastic slide blocks? One point of interest is the fact that the Mohawk high-strength steel channels discussed here are rolled at only three steel mills in the world.

Some of our competitors say our lifts are "overbuilt." We accept the compliment. Some people ask, "Do I really need all that strength? Won't less expensive lifts work too?" The answer is no! All the "extra" steel in a Mohawk lets you pick up vehicles the other lifts can't. If you were an NFL halfback, you'd have 300-lb. linemen blocking for you. As a mechanic, why would you risk your life working under a car held up by a lift with columns built like a 98-pound weakling? (Like some of our competitors.) Some competitors may *rate* their lifts at the same capacities as Mohawk lifts, but the issue isn't capacity, it's *ability*. You may be able to lift an 80-lb. bag of cement, but can you hold it at arms length? Safety? For how long?



Competitive plastic sliders



Mohawk bearing

Bearings

All Mohawk lifts use at least 16 double-sealed, self-lubricating, steel ball bearing rollers, housed in steel casings throughout the design of our carriages. There just isn't a better bearing anywhere on earth for this type application. A few years ago, all lifts made used these steel bearings, but in an attempt to continually reduce manufacturing costs, most of our competitors have chosen the plastic slider method. For the same reasons that Mohawk uses these steel bearings in this application, all forklifts, gantry cranes, and heavy industrial equipment use steel ball bearing rollers. The bearing we're discussing is the 4" bearing that rides in the **C**-shaped lift channel (naturally our TP-18/26 lifts use bigger bearings, which ride in tandem from each bearing support and the channels of the TP-18/26 models are considerably larger.) If a competitive lift company tells you that the heavy steel construction versus formed sheet metal, and steel ball bearing construction versus plastic slide blocks aren't necessary for a lift, ask them why. Yale, Clark and other forklift manufacturers haven't changed their design to these lightweight materials. Other manufacturers claim that their plastic slide blocks are maintenance free, but every one of them require you to clean and lubricate the columns monthly. **Big point here—Mohawk bearings are maintenance-free. They save you money!**

The second type of bearing found on all Mohawk carriages is called a cam follower. These 1 1/2" bearings (on the A-7 and System I models, 4" on the LMF-12 and TP-15 models) ride on the side of the channel. Again, our cam followers are double-sealed, self-lubricating bearings that require no maintenance. Their purpose on the lift is to handle what is known as thrust load (sideways load) which is necessary when working on plows or dump-bed trucks. Again, these are maintenance-free bearings: no maintenance, no cost of maintenance, no greasing, no regular checking that they're operating OK. All this equates to you spending more time servicing vehicles and making money—as opposed to checking on your lift and servicing it.

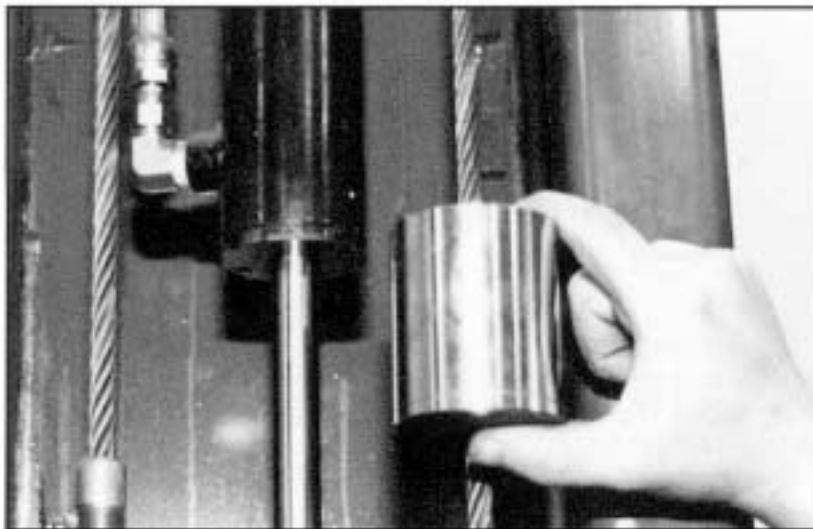
The great majority of lift manufacturers use plastic/Teflon(R) sliders (aka slide blocks). Some lift manufacturers even use unlubricated bushings. Since most people reading this are in the automotive field, we don't have to explain the difference between bearings and bushings. Even so, some lift companies call their bushings "bearings." These systems (like many other lift components) make these competitive lifts much cheaper to manufacture. Plastic sliders don't have the life expectancy of the steel bearings Mohawk uses. Furthermore, all lifts

All Mohawk lifts use at least 16 double sealed, self-lubricating steel ball bearing rollers. They last!
To reduce costs, most competitors use inferior plastic sliders like those shown here. They require greasing, collect dirt, and have much shorter life expectancy.

using plastic sliders require heavy greasing between the column, slider and carriage. Of course, grease is like a magnet to any dirt, grit and rust common in a repair shop. As the carriages travel up and down, this grit acts as an abrasive between the lift column and the plastic slider. This condition always results in wear. Besides, would you rather be using a lift which depends on a bearing surface or a friction surface?

If a lift that uses plastic sliders isn't properly maintained, the sliders wear down to "little nothings." When they wear, the steel of the carriage will contact the steel of the lift column, scratching and wearing a groove into the column. If the user later decides to replace the plastic sliders (costing time and money), these new sliders will wear very quickly as they're now rubbing against the scratched steel column (as opposed to the smooth new column the lift once had). This situation is similar to a customer driving his brake pads down to the rivets. Once you get around to replacing the pads, it's too late; the rotors themselves are damaged. The difference is that you can put the rotors on your brake lathe, cut them and remove the groove, but with the lift column... well, you'll just have to buy a new column.

Now, let's look at drive mechanisms



Dramatic comparison: Mohawk uses the biggest cylinders (right) in the industry. Lifting the load is easier on the structure, and the pump and motor work more easily and last longer. Competitors' smaller cylinders (left) must work harder to raise the same load, causing premature wear on hydraulic cylinders, seals, wipers and O-rings. Inevitably, the power unit works harder and wears faster.

The competitor's lift shown here has a minimal surface area of less than 4/10". Compare that to Mohawk's 3 5/8" round piston. Six times the surface area - a 1,000 pound engine hoist uses a bigger piston than this competitor.

Cylinders:

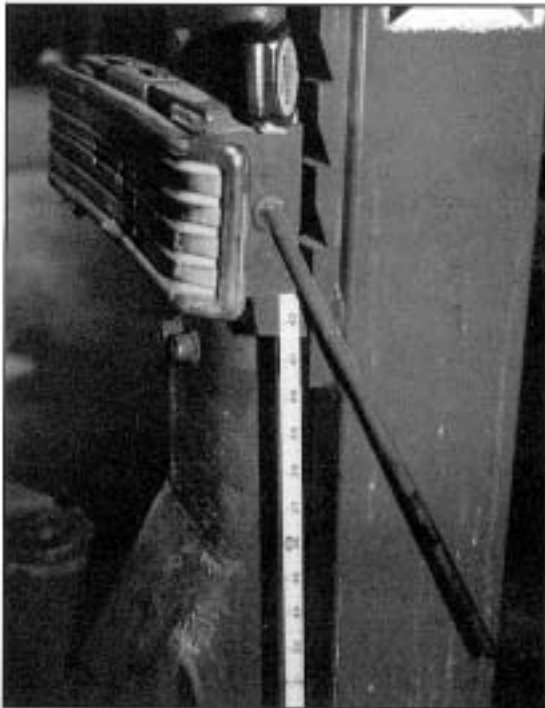
All Mohawk lifts use two cylinders, one in each post. Mohawk uses the biggest cylinders in the lift industry on every model we manufacture. Large cylinders serve two key functions: they make lifting the load easier on the structure; they decrease the pressure (psi) needed from the pump to power the load up, also letting the electric motor and pump work more easily and last longer. Obviously, a smaller cylinder has to work at a higher operating pressure than a large cylinder to raise the same load. Higher operating pressures lead to premature wearing of the

hydraulic cylinders, seals, wipers and O-rings, causing the power unit (motor and pump) to work harder and wear faster. Higher operating pressures cause the motor to draw more amps, costing you more to run! Higher operating pressures also cause our competitors to leak or burst their hydraulic hoses (Mohawk uses steel lines throughout), again leading to maintenance cost and downtime. We're so certain our larger cylinders are better that we actually put our money where our mouth is and warranty our cylinders for as long as you own your Mohawk lift!



LIFETIME CYLINDER WARRANTY

Mechanical safety locks



Note how high competitor's lift must be raised before safety locks engage. In contrast, Mohawk All-Position safety catches engage every 2" to protect you, beginning just as soon as the lift begins to rise.



Mohawk mechanical locks are all-position locks.

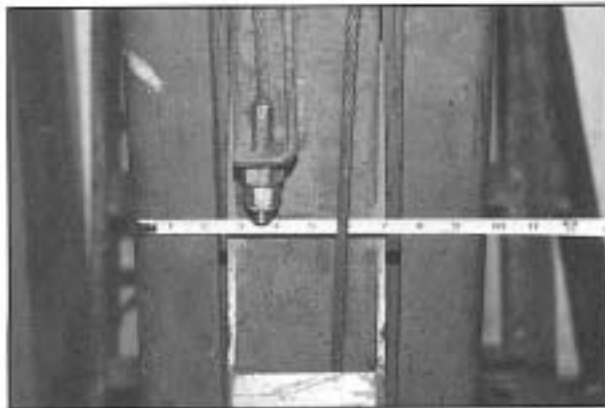
The safety locks on all Mohawk lifts are All-Position safeties. These safeties engage every two inches all the way up and all the way down. Many of our competitors' safeties don't engage until the lift is 18" or even 36" off the ground. Mohawk's strongly held belief: even if a car is only 3" in the air (for example, when removing a dually wheel off a 1-ton truck), the lift should operate in total safety! Under a Mohawk lift you can feel completely confident and safe at any height. With other lifts, you can't. Why would you even think of buying a lift that doesn't have mechanical safety locks that start engaging as soon as the lift starts going up? If you were doing a

rotate-and-balance, with some lifts you'd have all the wheels off but no safeties on. Would you get under a car that was just held up by a floor jack? No, you would put jack stands under the vehicle first because it's not safe. There's no difference between this example and working on a lift that hasn't reached its safeties yet. With a Mohawk lift you won't need jack stands, saving you time—and time is money. Mohawk lifts offer additional safety, but not at additional cost (in terms of safety or time).

Mohawk mechanical safeties are gravity activated and automatically reset every time the lift goes up. Some lifts use spring-loaded

safeties requiring regular maintenance and most definitely do not reset automatically at mid-height when the safeties are released. Some competitors' lifts must be fully lowered to re-engage their mechanical safeties—or their safeties must be manually re-engaged at mid-height. Suppose someone forgets? Better play it safe with Mohawk! Working under a Mohawk lift at any height, you know the safety catches are always engaged. It's a comfortable feeling that lets you concentrate on getting the job done instead of worrying about the safety of your employees or your customers' cars.

Next, compare carriages



Competitive columns often use pitifully narrow design. (Note 5" wide carriage and 10" wide column).

Mohawk carriages are made of 3/4" welded steel plate. We emphasize welded because most of our competitors build their carriages in the same wimpy way they build their columns: sheet metal, put on a brake and bent.

Welding for sure is the most expensive way to build a carriage, but Mohawk isn't in the business of cutting corners. More important than the added expense is the fact that welding results in the strongest possible carriage. Everybody knows that the more times you bend a piece of steel, the weaker it gets. Whether we're talking about the steel we use for columns, carriages or swing arms, we're always proud to say to a customer or prospect: "Here's a piece of a Mohawk lift. It's not bent at all—it's welded."

Mohawk carriages are designed so the swing arm fits securely into the carriage between two pieces of 3/4" steel plate. The load on the arm is supported by a steel "shelf" underneath, and snug-fit on top. We then use a 1" steel swing arm bolt to pin the arm into the carriage for the next 100-or-so years. The Mohawk design virtually

eliminates shearing forces. The weight of the load is borne by the tensile strength of the carriage and swing arm bolt, not just the shear strength of a loosely fitting pin like some competitors use.

To save money, most competitive lift carriages are assembled just the opposite way—the arms fit over the carriage and are then pinned in. It doesn't take a rocket scientist to figure out that Mohawk's method of securing the arms leads to less deflection, means less chance of bending, grips the arm more firmly, and allows the arm less chance to slip. Those are good enough reasons for us.



Competitor's bent swing arm is inherently weak.

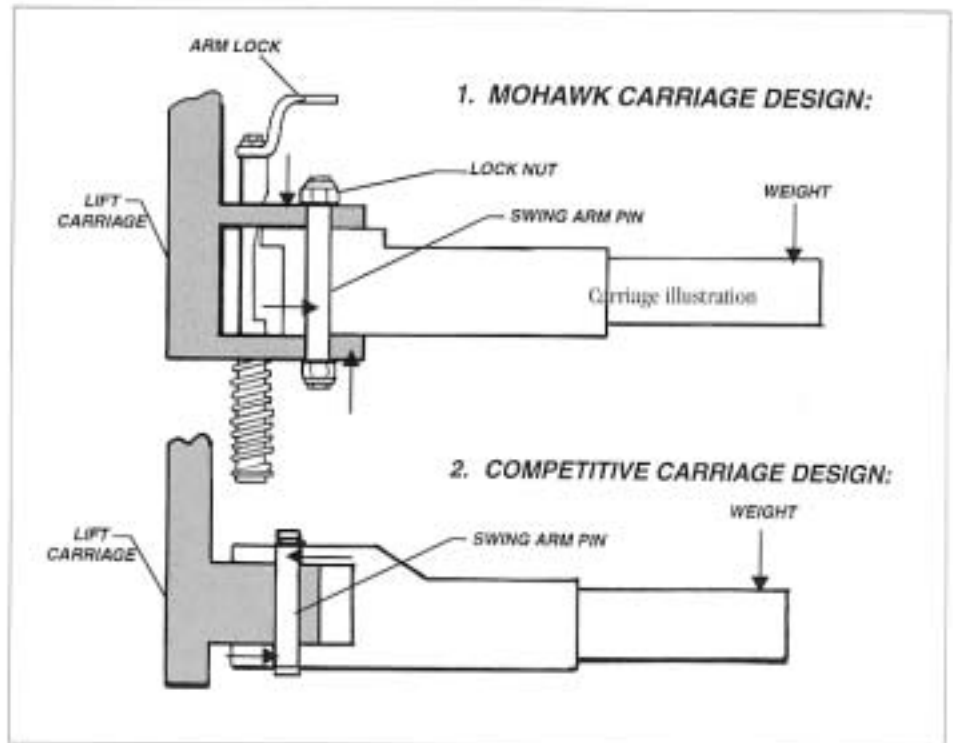


Competitor's inferior arm/carriage design can result in bent arms, and elongation of holes as pin wears at carriage.



Competitor's arm design is so weak that an extra gusset is required in an attempt to make it stronger.

Again, on most competitive lifts, since the arm is holding the carriage (instead of Mohawk's stronger method of the carriage holding the arm) the swing arm hole pin wears, and the hole grows out of round. Then the arms will sag permanently and drag across the floor when the lift is down...wasting your time and wasting your money.



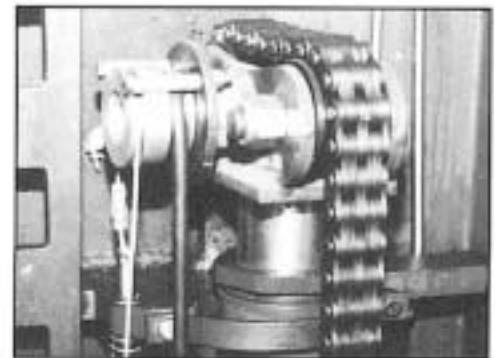
Mohawk's carriages (top) grip the arm distributing the load (↑) throughout vs. competitive lifts with 100 percent shearing force (↑) on the arm pin.

Chain break safeties

Mohawk 7,000 (model A-7) and 9,000-lb. (model System I) capacity lifts are chain drive lifts, whereas Mohawk 12,000-lb.-and-above-capacity two-post units are direct drive lifts. Later in this brochure we'll go into the design and operational differences of direct drive, chain drive, and cable drive lifts. For now we'd like to discuss the chain break safety feature found on the Mohawk A-7 and System I.

In looking near the top of a Mohawk cylinder, you'll see a heavy spring, attached to a cable, which again is attached to both the mechanical safety lock and the

posts. This is Mohawk's exclusive chain break safety. If a chain or a weld ever broke, the mechanical safety will lock itself into the safety track so fast you wouldn't have time to see it! Though a chain or its weldment has never broken since we've been building lifts, here again is an example of Mohawk's safety-in-design concern and another safety feature not found on competitive lifts. Mohawk may be preoccupied with safety, but if so it's for your protection, your shop's reputation, your employees, your investment, and your customers' vehicles.



Mohawk's exclusive chain break safety system employs a heavy spring attached to a cable, which in turn is attached to the mechanical safety lock and posts.

Chain lifting and direct drive cylinders:

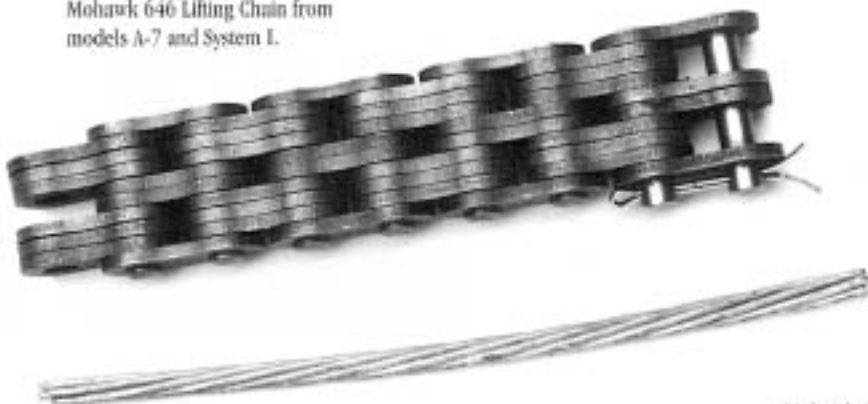
Our 9,000-lb.-capacity-and-below lifts use a #646 leaf chain (1 5/8" thick with 24,000-lb. tensile strength) lifting over the yoke bearings (yes, we use two bearings) to raise the carriages. Compared with competitors' cable lifting systems: chains don't stretch, chains can't fray, and virtually no maintenance is required on a chain-lifting system. Again, no maintenance cost and no downtime.

Some competitors use a single-hydraulic cylinder to raise both carriages. The single cylinder lifting method (of course) requires lifting power to the off-side post. To do this, cables (sometimes chains) are run through a set of pulleys from the main to the off-side posts. For maintenance, these pulleys must be greased and kept lubricated so they don't freeze up and stop rolling.

Cables have a limited lifespan. Cables stretch, eventually fray, need regular replacing, and on occasion

have been known to snap. A cable-lifting system is not as long-lasting, nor as easy to maintain as a chain-lifting system. Any single-cylinder lift that uses cables (or chains) to raise the off-side puts an undue strain on those cables at each location that the cable (or chain) changes direction. When a cable needs replacing, a shop owner can lose a lot of business waiting around for the lift repairman (who is probably busy replacing somebody else's cable) to show up. Figure at least \$300/day lost income, plus \$200-\$300 to have the cables replaced. But wait! *It happens again!* Furthermore, cables or chains must be routed to the off-side post across the floor covered by an obtrusive piece of diamond plate, or through an overhead cable/chain cover. Either of these two lift designs interferes with the everyday movement of people and tools around the lift and shop. Looked at on either a short- or a long-term basis, **the first time the cable fails, that cheaper lift costs more than a Mohawk.**

Mohawk 646 Lifting Chain from models A-7 and System I.



Cables are never used in Mohawk lifts.

Mohawk uses chain drives lifting over the two yoke bearings to raise the carriages. Chains don't stretch, can't fray, and no maintenance is needed.

Some competitors use cables that run through a set of pulleys. Cables (which must be frequently greased) stretch, fray, need frequent replacement, and can even snap. They definitely have a limited life span.



Double bearings on our lifting yokes provide long life and are maintenance-free.

Chain rollers:

On top of the cylinders of Mohawk 9,000-lb.-capacity-and-below models is a yoke with two bearings that act as a guide for each of the lifting chains. The entire load is on these bearings, through the chains. Mohawk is the only lift manufacturer smart enough to use two chain guide bearings on top of the cylinders. Like our carriage bearings, these are hardened steel, self-lubricating, maintenance-free bearings. All other lift manufacturers use one lonesome bearing. Some manufacturers don't even use hardened steel, which is why you'll see their bearings wearing away after only a few months in operation. A simplistic way to look at this Mohawk feature: two bearings as opposed to one equals half the lifting load or twice the life from the bearing.



Many competitors don't use automatic arm locks. Instead, they use wing nut arm locks that must be manually locked every time arms are positioned — and manually unlocked. This type is frequently ignored by mechanics, compromising their safety.

Safety systems

Mohawk's totally automatic safeties protect operators with more safety systems, different safety systems, and better safety systems than any other lift manufacturer on this planet. Often, we don't even refer to many of our Mohawk systems as safeties. To us, they are just integral parts of the construction and design of the Mohawk lift—features that make a Mohawk lift the best piece of equipment in the lift industry. After all: which brand of lift would you rather work under all day long? If you aren't already a Mohawk believer, consider the following:

Mechanical safety locks:

If you've read this far, you know that Mohawk lifts have all-position mechanical safety locks in both columns that engage the instant the lifting arms engage the frame of the vehicle being raised. These mechanical safety locks are made of 3/4"-thick steel plate that

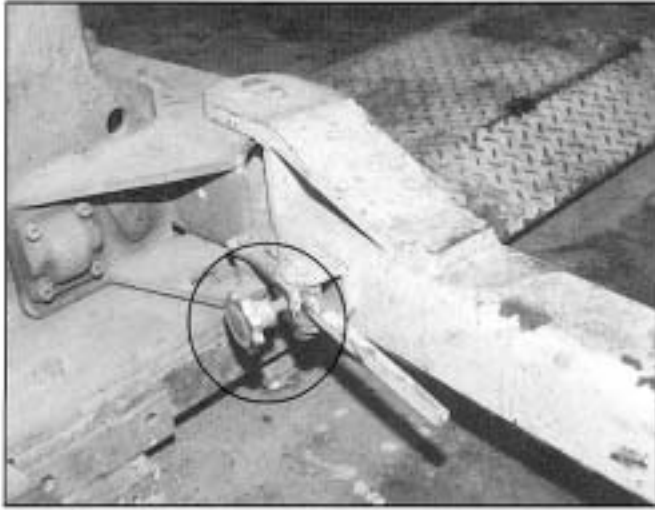
engages every 2' all the way up. Another advantage is these full-time operational safeties are in both columns. Many competitors have full-time safeties operating on the main-side only (see photo page 6). The off-side safety comes into play only when a cable breaks. When you can't avoid a collision, it's too late to put on your seat belt.

Arm restraints:

All Mohawk lifts incorporate automatically engaging swing arm restraints to prevent the arms from shifting when off the ground. After positioning, Mohawk arms remain in position as soon as the arms leave the floor. As soon as the arms return to the floor, the arms release and become "free floating" to be removed from under the vehicle frame. A mechanic need not bend down to release Mohawk arm restraints—he removes the arms with his foot and that saves time. Once again, faster, easier, and profit-enhancing.

When ANSI standards were updated in 1990, arm restraints were required on all two-post lifts. Most major lift companies now provide some sort of restraint device on the swing arm. But many lift companies' arms don't lock automatically. Instead, the arms must be manually locked each and every time the arms are positioned, and manually unlocked whenever the lift is lowered. Arm restraints like this are frequently ignored as mechanics find them inconvenient to use. What happens? Often these "wing nut-type" manual-set arm restraints are disabled or removed. And safety is removed at the same time. A mechanic will use Mohawk arm restraints rather than disengage them as so frequently happens with competitive lifts. He will be protected by the safety, but the protection will not require any effort on his part.





Other competitors' twist knob arm locks have the same problems and limitations as wing nut arm locks shown on previous page. In contrast, all Mohawk lifts incorporate automatically engaging swing arm restraints to prevent arms from shifting when they are off the ground.

Hydraulic safeties-external:

Mohawk's external hydraulic safety systems consist of velocity fuses (mounted on each cylinder where the hydraulic line enters the cylinder), plus pressure-compensated flow control valving (mounted between the power unit and the hydraulic line coming out of the unit). These two types of safeties are always "open" and monitoring the pressure within the entire hydraulic system. If a hydraulic line were ever to burst, these hydraulic safeties would shut the lift down by stopping the flow of fluid throughout the system. These hydraulic safeties cannot be re-opened until hydraulic pressure is applied from the opposite direction (as when the lift is raised). Once more, these three different valves represent additional safety systems not found on most competitive lifts. As an extreme example, take any competitive lift and stand it next to a Mohawk. Put a car on both lifts,

release the mechanical safety locks, and cut a hydraulic line! What happens? **The Mohawk lift won't come down, while the other lift won't stay up!** This of course isn't recommended. But if Murphy's law applies in your shop, you'll never find yourself explaining to a customer that a hose on the lift burst, and that's why his car came crashing down before you had a chance to put the wheels back on.



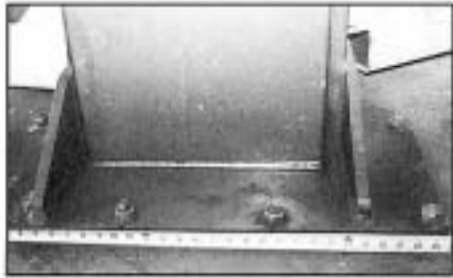
Mohawk arm restraints automatically engage every time.

Hydraulic safeties-internal:

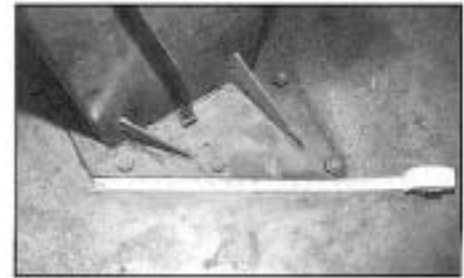
Mohawk's internal hydraulic safeties combine with our external hydraulic safeties to anticipate and protect against any possible mishap. Our internal hydraulic safeties (on both cylinders, of course) are calibrated to detect side-to-side pressure differentials of less than 200 lbs. and, should an imbalance occur, hydraulically lock both cylinders. So if you should inadvertently lower a car onto a tool box or even a soda can, our internal hydraulic safeties will detect this pressure imbalance and lock up the lift. These internal safety systems are Mohawk's exclusive and patented system (U.S. patent #45700071) which has been operational in the field since 1982. It's also a Mohawk safety exclusive not found anywhere else in the lift business.

Steel hydraulic lines are another Mohawk safety feature we ought to mention. Unlike rubber-coated hydraulic hoses, a steel line won't melt when a hot exhaust clamp drops on it, and won't wear at contact points where rubber hoses can chafe. Steel lines do not swell under pressure as rubber hoses ultimately do, causing a rupture and requiring replacement. Finally, steel lines don't flap around in the breeze, getting banged by tool carts or caught in cable pulleys. Mohawk's steel hydraulic lines are bolted and clamped into position. Unlike our competitors, you won't find "C" clips with double-sided tape on anything Mohawk builds!

Mohawk footings are made of 3/4" steel plate. Our larger footings reduce pressure on your garage floor and make for a more stable lift.



Many competitors compensate for small footprints by adding 90-degree angle iron to the foot of the lift — an annoying obstruction for a mechanic.



Column footings

Mohawk footings are made of 3/4"-thick steel plate. No other lift manufacturer uses thicker steel. In fact 9 out of 10 use a lighter material.

The footing is the part of the lift that contacts your shop floor. By making our footings as brutally large as we do, pressure (as measured in psi) exerted on your shop floor is reduced. Competitive lifts with small footprints that exert a high psi are bad because they can easily crack your concrete floor and don't provide a stable footing. Large footprints like Mohawk's that exert a low pressure are best for any lift's stability and for the shop floor it is mounted to. Look at the dramatic difference:

Most fully loaded competitive lifts exert between 75 to 125 psi on the garage floor. That could be too much! No fully loaded Mohawk lift exerts more than 50 psi. That's plenty safe! (It's easy to figure psi: just add the weight of the lift to the fully loaded capacity of the lift, then take your calculator and divide by the total square inches of the lift's two footprints). Even if your shop has a strong floor, you should be concerned with the lift's footing. What happens if you outgrow your shop and move to a facility with a not-so-strong floor? All of a sudden, pressure on the shop floor becomes crucially important. The best advice: Plan ahead.

Another way to think about lift stability and pressure on your shop floor is to think about a 110-lb. woman wearing spiked high heels. If she stepped on your foot she could put a hole in it. But if she were barefoot, you'd barely notice it. (Unless you have a foot fetish!) Concentrating all that weight in a spiked heel or a small lifting footprint, exerts lots of pressure on the floor, and won't provide much stability for the lift, or its load. One ad for a competitor's lift talks about "the small but stable footprint." Sorry, folks, the two are mutually exclusive. It's either small, or it's stable—a footprint can't be both.

Many of our competitors try to compensate for their small footprints by adding 3"x3" 90-degree angle iron to the foot of the lift. These angle irons help secure the lift to the floor, but they are an annoying obstruction for a mechanic trying to roll his toolbox and jacks around the shop. Instead of working with the lift, you're working around it. Mohawk lifts don't have this problem. They're easier to work with, meaning they're faster to work with, meaning you make more money when you use Mohawk lifts. Another disadvantage to using these angles is that they limit the lift's ability to stay bolted to the floor. Should the first bolt loosen (and maybe even pull out), the second, third or fourth are right behind. Again, this can't happen with a Mohawk lift because of the anchor-bolt pattern.

Column width

In providing a strong, stable lift, Mohawk's design theory is (again) to spread the load. That's why Mohawk lift columns range from 18" to 22" wide. By comparison, most other lifts only have a 6" to 10" column width. You would never try to raise a 100-lb. barbell by grabbing it with both hands in the middle. You would space your hands shoulder-width apart for a stable grip. There's no difference when raising a vehicle 6 feet in the air. How wide are a weightlifter's shoulders?

Having read this far, it's time for a quick laugh. What if a customer accidentally drove his car into a Mohawk lift? He'd have to replace the car. What if a car were accidentally driven into a sheet metal competitor's column? You'd replace the lift (and car). Case closed.



Narrow columns with small base and few anchor bolts provide minimal stability.



Competitors' rubber lifting pads are not nearly as safe or long-lasting as Mohawk's steel lifting pads.

Additional product features

We've discussed columns, carriages and safety. Now we'd like to touch on additional benefits that are standard features you ought to know about on Mohawk two-post lifts.

Lifting pads:

Mohawk uses corrugated steel lifting pads to contact the vehicle frame. These are big, easy-to-position pads, not flip pads with little surface area. We freely admit our steel pads may never win a beauty contest. They may even be the ugliest lifting pads in the industry. The fact is, steel lifting pads are safer and longer-lasting than any rubber and/or poly contact pad could possibly be. Especially when you put teeth on your pad as Mohawk does! Quite simply, a steel lifting pad contacting a vehicle's steel frame has a much lower chance of slipping out from under a vehicle than does an, oily, greasy rubber pad. Furthermore, the rubber/poly pads found throughout the lift industry always wear and are expensive to replace (never mind the

Competitors' flip-up adaptors require space for flip-up section. Another disadvantage: the small pads must be painstakingly set up, wasting your time. Competitors' screw-pad systems are unsafe (they can allow a vehicle to slip) and again waste valuable time. Mohawk's quick-connect stacking pin adaptors are the fastest, easiest and best system, allowing the lowest possible arm clearance for easier access.

smell when they contact a hot exhaust pipe). But if you insist on rubber lifting pads, we'll happily provide them.

Adaptors:

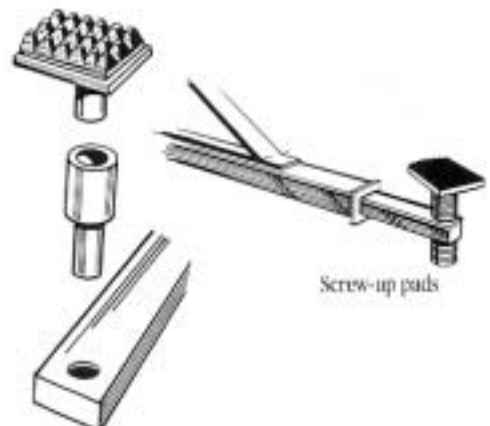
Adaptors are needed for arm clearance when lifting trucks, minivans, 4x4's or any of today's popular sport utility vehicles. There are three different types of adaptors in the lift business: #1 is the Mohawk "quick connect" stack adaptor system; #2 the screw-up (well named) adaptor system; and #3 the flip-up adaptor system typically associated with in-ground lifts.

Mohawk's stacking quick connect system is clearly the fastest, safest, easiest and best. It allows Mohawk to offer the lowest possible arm clearance (3 1/2" minimum height on a System I or II and 4" minimum on the A-7 model), permitting easier access under the lowest-riding sports cars and imports. And it does all this in just about five seconds. When Mohawk truck adaptors are needed, they're quick and easy to use. Like putting an extension on a ratchet, simply take the lifting pad off, pop in the adaptor, and put the pad back down. It's safe, it's secure, and you can't mess up.

Total contact area is 1/2" x 3"



3-Position Flip Pad



Screw-up pads

Mohawk swing arm is only 3 1/2" tall for low riding cars.

Some people question the safety of the screw-up pad type adaptors found on other lifts. If all four pads aren't raised the same number of turns, the vehicle will not be supported evenly and could slip. Many screw pads can be screwed up far enough to be unsafe, where the screw shaft is only held in its socket by a single thread. Finally, because screw pads always have the screw shaft to contend with, low arm clearance, even in its lowest position, is always 4 1/2" or more. Yes, an inch higher than Mohawk. You say it's not important as you don't service imports. What about sagging springs or the fact that the auto makers are lowering the cars for increased aerodynamics? Ask yourself, what will you be servicing two or three years from now. What will Detroit be building in two or three years? You've seen what cars of the future will look like!





Competitors' screw-type pads have a high profile — always 4 1/2" or more. But even at their highest position, they often don't reach the vehicle frame.

The disadvantage of the flip-up adaptor method is that it requires space for the flip-up section, even in its lowest position. This height requirement is why no flip up adaptor lift has an arm clearance lower than 4 7/8". Over an inch higher than our automotive lifts. Even our larger 12,000-lb. and 15,000-lb. car and truck lifts are only 5" high when fully lowered. So our larger lifts are suitable for low-riding cars. Another disadvantage to the flip-up pad is the very small surface area of the pad that makes contact with the vehicle when the pads are flipped up. Just setting up these pads can take a while to place them perfectly on the frame. Not so with a Mohawk.

Another important advantage of Mohawk's stacking pin system is the ability to stack the pins extra high should a vehicle have a high frame and low rocker panels—a 4x4 truck, for example. When this truck comes into your shop equipped with a Mohawk lift, all that's required is to use the extra pads we provide. Some lift companies sell these height adaptors as optional equipment and most only come two per set. Not enough for a truck with running boards!

Competitive arm adaptors have problems and limitations. Screw-pad systems waste all kinds of time! With one vehicle they have to be screwed up, and with the next screwed down. With flip-up systems, if the three position pads are at their highest position and still don't reach the vehicle frame, shop owners will frequently find themselves scavenging around for the optional height extenders or using wood blocks (not safe!). Trying to overcome these problems, lift manufacturers who use the screw-up lift pads and the three position flip pads have both come up with spacers that attach to the end of the lift arms. Yet the fact remains, these extenders (spacers) don't reach every vehicle frame as the Mohawk stacking system will, and they come to you at additional cost.

Mohawk lifts come with adaptor holders that attach to the side of the lift. These holders prevent the adaptors from rolling around the shop and getting lost, another "minor detail" that most competitors don't bother with. Why do you need them? So that you know where they are when you need them (and because height adaptors left on the floor can rust out, and then you can't use them).

A final point to remember here: Three sets of Mohawk quick-connect stacking adaptors are standard equipment with our lifts. Most companies charge extra for lift adaptors, some as high as \$475 (when we last checked) for their full set of adaptors. If you don't think you need adaptors because you don't work on trucks, ask yourself if you work on Bronco II's, Ford Explorers, mini-vans, Toyota 4Runners, S-10 Blazers, and so on. These vehicles—millions of them and growing in popularity—frequently have running boards, spoilers, extra gas tanks, and body trim (molding), all of which require adaptors. One more time: Mohawk adaptors are standard equipment at no extra cost.



Other items with all Mohawk lifts

Hydraulic fluid: Mohawk uses Dexron II automatic transmission fluid (ATF) in our hydraulic systems. Most lift companies use a common jack/hydraulic oil. Advantages of Dexron II: Every shop has it, it flows much better on cold winter mornings before the shop has warmed up and, most important, it extends the life of internal hydraulic components such as wipers, O-rings and seals.

One more point for our side: Mohawk lifts are always shipped with Dexron in them. Competitive lifts arrive dry. Here's another expense you incur when installing that "other" brand.

With a Mohawk lift, we even supply you with the male and female electrical connectors for a quick plug in/start up of your new lift. Included with each lift are the anchor bolts. We also provide a variety of shims to level the columns for installation and even provide red and yellow touch-up paint to keep your lift looking new! The point is: no one cares like Mohawk!

Hydraulic synchronization: All two-post lifts must be kept synchronized with the opposite side post. Mohawk lifts are hydraulically synchronized from side to side. We do this by displacing hydraulic fluid from the main-side cylinder to the off-



Mohawk TP-15

Mohawk lifts allow even the tallest box vans to be fully raised. Mohawk lifts are hydraulically synchronized from side to side through overhead steel hydraulic lines. These can also be routed underground.

side cylinder through overhead steel hydraulic lines. **These lines can be set at any height**, routed up to the shop ceiling, cut lower to fit in a low ceiling shop (while still giving you a "clear floor lift"), or routed underground by cutting a 1"-deep-by-1"-wide trough in the concrete floor (especially applicable to large shops with an overhead rolling crane that goes from bay to bay). The versatility of Mohawk's steel hydraulic lines and absence of a fixed-position overhead cable or floor cover also allows you to install Mohawk lift posts wider or narrower (within limits, of course).

What do competitors do? We can't wait to tell you. All other two-post lift manufacturers use either cables or chains to mechanically equalize the two carriages. If the lift has a floor brace, the cable/chain is routed through it. If the lift is a clear floor model, the cable/chain is routed overhead through a cable cover. There are two main disadvantages to a system like this: First; the overhead cable cover (generally light sheet metal) is fixed in position. This cover often will not allow a taller truck or cube van to be fully raised and serviced. The obvious reason is that

the vehicle roof hits the overhead cable cover. To combat this, many lift manufacturers put an overhead shut-off switch below the cover. This shut off is operated by a \$10 micro switch; if the switch fails, a crushed roof results. Problem!



Competitors' micro-switch

Second disadvantage: One "quick fix" some lift manufacturers resort to is extending their columns to set the overhead cable cover even higher. Again, you pay—anywhere from \$200 to \$450 for a 1' to 2' extension. Yet even with these extensions, roof racks, emergency lights, and other vehicle equipment can hit the overhead cable cover and not the shut-off switch (and not all lifts have a shut-off switch!). What if an open hood hits the cover? Problem! You will be in the market for a new hood. Do you want to watch the hood every time you raise a vehicle? No! That wastes time and wasted time is wasted money.



Competitive two-post lift manufacturers use cables or chains to equalize the two carriages mechanically. Then they put an overhead shut-off switch, operated by a \$10 micro-switch below the overhead cable cover. If the switch fails, a crushed vehicle roof can easily result.

Asymmetric lifts:

Asymmetric lifts are also known as off-set, as that's how they raise a vehicle. Basically, there are three different types of asymmetric lifts. One—like the Mohawk A-7—has its columns slightly rotated toward the rear of the car. The swing arms are straight, distributing the lifting load into the columns and not onto the arms. The second type of asymmetric lift doesn't have rotated columns. These lifts have columns that are square to each other and accomplish the open door aspect of an asymmetric lift by putting a bend (similar to a shoulder and elbow) in the front swing arms. What happens when a lift is designed this way? Instead of transferring the load into the columns (like an A-7), the lifting load remains with the swing arms. Imagine holding an 80-lb. bag of cement—you'd naturally hold it in front of your chest! Not off to the side like these cheap asymmetric "wannabes."

The third type of "cheaper to build" asymmetric lift has posts that are over-rotated to a full 90 degrees. This is even worse than the bent elbow/arm design in terms of how it loads the vehicle and distributes weight throughout the arms, carriage and posts.

A true asymmetric lift turns (rotates) the post so that the "chest" of the lift is facing the center of gravity of the load being lifted. Mohawk is a true asymmetric lift!

Lifting height:

To be brutally frank, many lift manufacturers lie on their spec sheet about how high their lifts raise. There is only one issue to look at here, but in two different ways: How high will the lift raise the swing arms so you can walk under them without banging your head? and how high will the lift raise the vehicle, as measured at the top of the swing arm lift



One of our competitors employs bent elbow/arm design in front swing arms. This can often result in damage to a vehicle door.

pads (not including the added height of the truck adaptors)?

We consider the lowered height of a Mohawk swing arm to be 0". The Mohawk arm has a lifting stroke of 6'. If you add the height of the lift pad (ranging from 3 1/2" to 5" depending on which model) to the lifting stroke, this is the true measure of how high the lift raises. If you want to go higher, just add the truck adaptors, or stack them on top of each other for even greater lifting height.

Other lift manufacturers show the lowered height of their swing arm (0"), then show their lifting height spec at the top of the swing arm! It's like measuring a man's height to the top of his hat! It "appears" that other lifts raise as high as Mohawk, but they don't.

Shipping weight:

Some manufacturers make a big commotion claiming their lifts are heavier. Don't be fooled!

Shipping weight does not relate to safety—heavy packing materials that get discarded do not make a lift safer or better built. Installed weight is what affects safety. Likewise, heavy components that don't contribute to structural integrity don't contribute to safety. The point is the operational weight of a Mohawk lift doesn't get wasted on heavy crating, shipping pallets, equalizer cables, cable covers, overhead shut-off switches, column extensions, and other needless materials.

As described earlier, a lift's support comes from its wide, stable

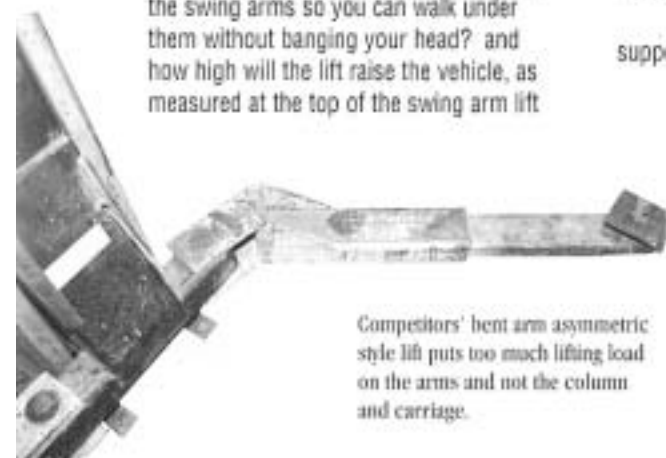
footprint. Overhead cable covers found on most lifts are not structural supports. That's why Mohawk 2-post lifts up to 30,000 lbs. capacity do not have, or need, an overhead cross member, cross bar, or cable cover. When comparing the weights of lifts you're considering, ask if you're buying a 2-post lift or a 2-post lift with overhead covers and 100 lbs. of cable.

Welding:

Throughout the construction of Mohawk lifts, we use long, heavy, continuous welds. We invite and encourage anyone to compare our welds with the spot and sectional welds found throughout all our competitors' lifts. We use more steel everywhere in our lifts, including the welds! This is still another feature that demonstrates the superior strength and quality of Mohawk lifts.

Warranty:

Mohawk offers the only limited **lifetime cylinder warranty** in the lift business. Our five-year parts and service warranty surpasses all others. While a handful of lift companies offer a five-year warranty, our Mohawk warranty includes all parts, labor and mileage to and from your shop, and freight paid both ways should a part be needed from the factory. Most of our competitors include this fully inclusive coverage for only 12 months. Mohawk offers five years' peace of mind!



Competitors' bent arm asymmetric style lift puts too much lifting load on the arms and not the column and carriage.



Mohawk's true asymmetric design (see Mohawk photo left) rotates the posts so the "chest" of the lift faces the center of gravity of the load.



Power units

A Five Year Warranty

Mohawk uses U.S.-made Monarch hydraulic pumps with U.S.-made electric motors (either Baldor or Doerr). Monarch is best known for their DC pumps. You'll find Monarch pumps in most trucking, public works, tow trucks, and road machinery applications where the equipment demands a lot from a constantly running pump. This contrasts with the relatively easy task a pump is asked to perform on a Mohawk lift. Some specific features of the Monarch power unit compared with other power units used in the lift business are:

1) Steel-hardened gears. Other pump manufacturers make their gears with powdered metal (leading to chipping gear teeth and premature failure).

2) Thrust ball construction. In the operation of any motor/pump unit, there's a tendency for the two units (motor and pump) to want to separate under pressure. The thrust ball design positively prevents this.

3) Internal pump components made of hardcoat aluminum (versus competitors' untreated aluminum or cast iron components). Space age hardcoating produces a surface that is actually harder than untreated aluminum or cast iron and provides better resistance to chipping or scoring.

4) Full needle bearing construction versus competitive power units that use internal bushings (we've previously discussed the advantages of bearings over bushings).

5) A heavy-duty (thicker steel) welded reservoir that won't dent, ding, rust out, and leak the way competitive units do.

6) While rated at 2 hp the electric motor used on Mohawk lifts/Monarch pumps generates 2.8 hp based on a five minute duty cycle. Since no lift takes more than five minutes to raise, it's safe to say the Monarch power unit is always operating at 2.8 hp.

7) The electric motor is totally enclosed, sealed against foreign objects, dirt, grease, and whatever else getting into the motor and creating serious problems. Just as important, if the lift is located outdoors, rain won't penetrate (as opposed to open, fan-cooled motors).

Mohawk/Monarch power units and their electric motors are designed and tested to start and run under maximum load conditions at a minimum voltage of 190 VAC, which is THE KEY as to why Mohawk Lifts/ Monarch power units DON'T FAIL! Make sure you ask if the motor will not only start under full load with low voltage, but will it continue to run for a long life under low voltage?



Questions to ask before you buy



A few lift manufacturers are causing confusion in today's lift market, claiming they are building any lift available (of course, they always say they can do it at a much lower price than Mohawk). If you hear this nonsense, here are a few good questions to ask:

How long has Brand "X" been building lifts? Can they give you a listing of customers that are using their various lifts? Better ask for a list of customers that you can call or visit. If this isn't available, ask yourself "why not?" Are you about to become a guinea pig test facility?

Does the company have product liability insurance? If they do, surely they can easily provide you a certificate of insurance.

How long has distributor "X" been selling lifts and this brand in particular? With all the fly-by-night companies around (distributors and manufacturers) it seems a five-year users' list should be readily available. On this same note, there are a number of warning signs you should know about when comparing Brand "X" with Mohawk, particularly when Brand "X" is promoted by mail order, by the classified sections of trade magazines (why wouldn't they take out a display ad like other advertisers?) or by telephone solicitation. Generally, no salesman comes to your shop and/or no factory phone number is shown on the brochure. Naturally, these lifts are advertised at "come-on" prices (to get you to call). If there's resistance to having a salesman visit your shop, ask what's going to happen when you need service on this "bargain lift?"

Lately, some equipment distributors (and even large manufacturers) are attempting to sell lifts via the phone, mail, or in person on a private label basis. **B e w a r e !!!** Shouldn't you have a factory standing behind the product as opposed to an office that sells private label lifts?? Of course you should! For your protection, call the "factory." Sometimes you'll discover the factory isn't a factory at all, but merely a "phone bank." Again, any legitimate company will naturally have a factory phone number and address on the brochure, and you'll find that Brand "X" will have the same exact photo of a '92 Chevy Suburban on the brochure that Brand "Y" has. Why? Because neither Brand "X" nor "Y" are the manufacturer! Examples abound. Remember, these too-good-to-be-true sales appeals are just that. They're intended to grab your attention, get you to call, and sell you the lift over the phone. The only thing that usually gets lifted is your wallet by these fast buck artists. Regardless of pricing, don't be fooled. You deserve better—a lot better. You deserve a Mohawk!

Why are Mohawk prices higher than other lifts? Because Mohawk hasn't cut corners on product quality like all the other lift companies. We haven't changed from 3/4" forklift steel to bent sheet metal columns. We haven't changed our sealed roller bearings for cheap plastic slide blocks, and we haven't shrunk our cylinders until they're as small as your thumb. We've simply remained a quality lift builder and the value we provide is as great as it's ever been.

In summary, we're sure you can see that a Mohawk lift is built like no other lift in the world.

We add safety where our competitors have none, we include equipment that our competitors charge you extra for (even though you'll need it to do the job), we build Mohawk lifts so you know they'll do the job they're meant to do. But it's not our ego that makes us want to build the best lift anywhere; it's your success that motivates us. When a Mohawk lift performs better, you make more money. Whether it's a high-cube van or a low-riding sports car, Mohawk gets it all the way up without the need for floor jacks or wood blocks. With features like automatic arm restraints, quick-connect height adaptors, extra lifting muscle, automatic all-position mechanical and hydraulic safeties—and many more—a Mohawk lift is easier to use. It saves you time and makes you money that other lifts can't. If a Mohawk saves you just five minutes a day, that's over \$1100 a year in additional income. Other lifts waste 10-15 minutes a day by trying to position the flip-up pads in the right place, or re-adjusting the screw-up lifting pads. And that doesn't include monthly greasing of the columns, fittings, and never-ending cable adjustments. **Now you do the math and see how much less it costs to use a Mohawk lift than the other brands.**

If you're concerned with the higher price of a Mohawk lift, think about the cost of not owning one, or owning a different brand. Because with these other lifts, the costs never end. We thank you for your time and consideration.

MOHAWK.

Because Quality Lasts Forever.



Model USL-6000

Full rise, space-saving, no-post, portable scissors lift, offers full under-car access.



Model A-7

The A-7 is a 7,000 lb. capacity asymmetric lift that allows full opening of all vehicle doors as well as total undercar/underdash access, thanks to Mohawk's unique "clear-floor" design. Low 4" arms accommodate all imports and low-riding sports cars. Includes both 3" and 6" truck adapters.



Model System I

The 9,000 lb. capacity System I, like all Mohawk lifts, features Mohawk's patented hydraulic equalization system with adjustable overhead (or optional underground) hydraulic lines. Offers low 3 1/2" swing arms and comes standard with truck adapters.



Model LMF-12, TP-15, TP-18, TP-26 & TP-30

These 12,000 to 30,000 lb. capacity models are the ideal heavy-duty lifts for up to Class VI trucks. Mohawk's unique "clear floor" design makes these the perfect lifts for all fleet applications. Truck adapters are standard equipment.



Model LMF-12



Model TR-50

TR-Series Ramp Style Lifts

Standard models from 25,000 up to 125,000 lbs. for total under-vehicle access.

Ramp lengths from 20' to 50'. Completely operated by a single technician, and features fully interlocked, redundant safety systems.

MOHAWK

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